

ABSTRACT OF THE DISCLOSURE

A MOSFET based, high voltage, high current AC electronic relay includes a MOSFET switching circuit selectively switching between switch conducting and switch isolation. The relay also includes a transformer coupled to the MOSFET switching circuit, the transformer selectively applies a predetermined voltage to the MOSFET switching circuit which establishes the MOSFET switching circuit in switch conducting. In addition, a switching assembly for use in an AC power control system includes a first MOSFET switching circuit and a second MOSFET switching circuit electrically connected between a first terminal and a second terminal, an electrical conducting member positioned between the first MOSFET switching circuit and the second MOSFET switching circuit. The switching assembly also includes a third MOSFET switching circuit electrically connected between the electrical conducting member and ground. Each of the first, second and third MOSFET switching circuits include first and second power MOSFETs and a depletion mode MOSFET. Finally, a MOSFET switching circuit for use in a power control system is disclosed. The switching circuit includes a first power MOSFET, a second power MOSFET and a depletion mode MOSFET.